# INDEX

Vol. 215—Pages 1–764

[New names in ***bold italics***. Systematic references in *italics*]


*Acanthodesia simplex*, 288
*Acanthotrapeza*, 47, 49
*Achaearanea*, 233
*Acinonyx jubatus*, 515
*Acmaea scutum*, 700
*Acraea encedon*, 704, 713
*Acropora*, 286, 315, 338
*Alces alces*, 466, 467
*Alectroenas*, 219
—*pulcherrima*, 228
*Allenopithecus*, 568
— *nigroviridis*, 567, 573
*Ammospermophilus leucurus*, 461, 511
*Amphiblestrum hastingsae*, 277
*Amphiuma*, 748
—*tridactylum*, 743
*Anabas testudineus*, 558
*Anarthropara horrida*, 293
*Anas*, 620–622
—*acuta*, 625
— —*acuta*, 622
— —*drygalskii*, 622
— —*aucklandica*, 619, 623
— —*aucklandica*, 620–624
— —*chlorotis*, 619–624
— —*nesiotis*, 620–624
—*blanchardi*, 619
—*castanea*, 620–624
—*chlorotis*, 623
—*platyrhynchos laysanensis*, 622
—*superciliosa*, 624
*Andrena*, 486
*Anguilla anguilla*, 549–560
—*rostrata*, 549, 557
*Anguis fragilis*, 77, 78
*Anodonta*, 699
—*cygnaea*, 699
*Anolis carolinensis*, 77
*Antechinomys laniger*, 510, 515
— —*(spencer)*, 514
— —*(=spenceri)*, 509
*Antechinus flavipes*, 510, 515
—*stuartii*, 510
*Anthidium*, 486, 487
*Anthophora*, 486
*Antilocapra americana*, 466, 467
*Antilope cervicapra*, 466, 467
*Antropora granulifera*, 277, 279
—*tincta*, 272, 275–277, 355
*Anzacia gemmea*, 233
*Apeltes quadracus*, 598
*Aphodius*, 368
*Aplopelia*, 219
*Aplysia punctata*, 698
*Apodemus sylvaticus*, 4, 369
*Apolopelia larvata*, 226
*Arachnura feredayi*, 233
*Araneus diadematus*, 237
—*pustulosus*, 233
*Arctocephalus gazella*, 95
*Ardea herodias*, 164
*Argiope aemula*, 237
—*argentata*, 237
*Arion ater*, 368
*Armadillidium*, 712
—*vulgare*, 712
*Arthropoma biseriale*, 313
—*cecilii*, 273, 313, 355
—*punctigerum*, 315
*Artibeus jamaicensis*, 590
*Ascaphus*, 208, 214
*Aspidelectra*, 276
—*defensa*, 272, 274, 275, 355
*Aspitrigla cuculus*, 154
*Astatotilapia elegans*, 141
*Astomus*, 405, 427, 429, 430
—*taenioides*, 405, 428
*Atlantisia*, 622
*Audouinia tentaculata*, 422
*Axis axis axis*, 466, 467
—*porcinus*, 466, 467

*Badumna longinqua*, 233
*Baiomys taylori*, 515
*Bavia aericeps*, 233
*Beania*, 273, 288, 289, 356
—*hirtissima*, 273, 288, 355
*Bettongia*, 508
—*gaimardi*, 516, 511
—*penicillata*, 510, 511, 515, 516
*Bombus*, 368, 486
*Bos*, 513, 514
—*indicus*, 515
—*taurus*, 19, 515
*Boselaphus tragocamelus*, 466, 467
*Boulengerula*, 740, 745, 747, 748
—*(Afrocaecilia) taitanus*, 740
—*taitanus*, 739–751
*Bowerbankia gracilis*, 178
*Branchiostoma*, 424

*Brevoortia tyrannus*, 134
*Brodiella ignota*, 274, 338, 355
*Buccinum undatum*, 699
*Bufo fowleri*, 748
—*marinus*, 745
*Bugula neritina*, 273, 289, 355
—*scaphoides*, 273, 289, 290, 355

*Caberea boryi*, 273, 286, 355
*Cacyreus darius*, 486
*Callinectes*, 664, 670, 672
—*sapidus*, 671, 672
*Callithrix jacchus*, 24
*Callorhinus ursinus*, 95
*Caloenas*, 219
—*nicobarica*, 227
*Calotes versicolor*, 76
*Calyptotheca nivea*, 273, 316, 318, 355
—*wasinensis*, 318
*Cambridgea antipodiana*, 233
*Camposmeris*, 486
*Cancer*, 664, 670
—*pagurus*, 670
—*productus*, 671
*Canis familiaris*, 515
*Capillaria*, 380, 381
—*erinacei*, 379–381
—*exigua*, 379
—*tenuis*, 380
*Capra aegagrus hircus*, 466, 467
*Capra hircus*, 514, 515
*Capreolus capreolus*, 466, 467, 469, 470
*Carassius auratus*, 134
*Carcinus*, 664
—*maenas*, 670, 672
*Cardioderma cor*, 438
*Carpilius*, 664, 670
*Catharacta skua*, 152–166
— —*hamiltoni*, 721
*Cavia porcellus*, 17, 19, 21
*Cebus capucinus*, 515
*Cellana radiata*, 698
*Cellaria punctata*, 272, 278, 282, 283, 343, 355
*Cellepora bernardii*, 342
—*parsevalii*, 307, 309
*Celleporaria*, 345, 349
—*columnaris*, 345
—*fusca*, 274, 345, 346, 355
***Celleporaria mauritiana***, 274, 346, 348, 356
*Celleporaria pilaefera*, 274, 343, 345, 355
***Celleporaria protea***, 274, 345–349, 351, 356
*Celleporaria tridenticulata*, 274, 346, 355
*Celleporella*, 177, 178
—*antarctica*, 177, 178
—*bathamae*, 177
—*bougainvillei*, 177, 178
—*carolinensis*, 177, 178
—*chiline*, 178
—*concava*, 178
—*delta*, 177
—*discreta*, 177, 178
—*hyalina*, 167–181
—*muricata*, 177, 178
—*tongima*, 177
*Celleporina*, 343
—*perplexia*, 274, 340, 342, 343, 355
***Celleporina tropica***, 274, 343, 345, 356
*Cellularia spatulata*, 283
*Centris*, 486
*Cephalophus ogilbyi*, 574
*Cercartetus concinnus*, 510
*Cercocebus albigena*, 573
—*galeritus*, 572–574
—*torquatus*, 572–574
*Cercopithecus*, 561–575
—*aethiops*, 566–568, 611, 616
—*(aethiops)*, 567, 615, 616
—*albogularis*, 569
—*ascanius*, 567
—*campbelli*, 567
—*cephus*, 567, 568, 573, 574
—*[cephus]*, 567
—*cynosurus*, 567
—*denti*, 567
—*diana*, 566–568
—*(diana)*, 567
—*dryas*, 574
—*(Erythrocebus) patas*, 611, 615, 616
—*erythrogaster*, 566, 567
—*erythrotis*, 567, 574
—*hamlyni*, 566, 567
—*lhoesti*, 561, 562, 565, 567, 568–574, 611–617
— —*lhoesti*, 569
— —*preussi*, 569
—*(lhoesti)*, 567, 616
—*(—)lhoesti*, 611, 612, 614, 616
—*(—)preussi*, 611
—*(—)solatus*, 611
—*mitis*, 567, 568
— —*albogularis*, 567
— —*albotorquatus*, 567
— —*kolbi*, 567
—*mona*, 567
—*[mona]*, 567
—*(mona)*, 616
—*neglectus*, 566–568, 572, 574
—*nictitans*, 567, 568, 572, 573
—*[nictitans]*, 567
—*patas*, 611, 612, 616
—*petaurista*, 567
—*pogonias*, 567, 568, 573
— —*grayi*, 574
— —*nigripes*, 574
— —*pogonias*, 574
—*preussi*, 561, 565, 567–574, 611, 612, 616
—*pygerythrus*, 567
—*sabaeus*, 567
—*salongo*, 567, 574
—*sclateri*, 567, 574
***Cercopithecus solatus***, 561–574, 611–617
—*tantalus*, 567
—*wolfi*, 567

*Cervus*, 198
—*dama dama*, 466, 467
—*elaphus*, 197–203, 469, 470
—*nippon*, 466, 467
*Chaetodipus baileyi*, 511
—*fallax*, 508, 511, 515
*Chalcophaps*, 219
—*indica*, 227
—*stephani*, 227
*Chaperia*, 276
—*acanthina*, 276
—*judex*, 272, 275, 276, 355
*Cheiracanthium stratiocum*, 233
*Chelydra serpentina*, 55
*Chenonetta jubata*, 619
*Chiromantis*, 748
—*petersi*, 748
*Chorizopora brongniartii*, 274, 326, 355
*Chthonerpeton indistinctum*, 740, 748
*Ciconia ciconia*, 726
*Circus eylesi*, 625
*Claravis*, 219
—*pretiosa*, 227
*Cleidochasma porcellanum*, 273, 318
*Clubiona cambridgei*, 233
*Cnemidophorus*, 56, 76, 78
—*exsanguis*, 77
—*inornatus*, 55, 56, 58, 73–75, 78, 79
—*neomexicanus*, 77
—*tesselatus*, 77, 78
—*tigris*, 78
—*uniparens*, 55–81
—*velox*, 77
*Coleopora*, 297
?*Coleopora seriata*, 273, 294, 297, 355
*Coleura afra*, 433, 438
*Colobus satanas*, 561, 573
*Columba*, 217–219, 221–223
—*arquatrix*, 218, 226
—*cayennensis*, 226
—*delegorguei*, 222, 226
—*elphinstonii*, 226
—*eversmanni*, 222, 226
—*fasciata*, 226
—*flavirostris*, 226
—*guinea*, 222, 226
—*leucomela*, 226
—*leuconota*, 222, 226
—*livia*, 222, 226
—*nigrirostris*, 226
—*oenas*, 222, 226
—*palumbus*, 222, 226
—*punicea*, 218, 226
—*speciosa*, 226
—*squamosa*, 226
—*trocaz*, 226
—*vitiensis*, 226
*Columbina*, 219
—*minuta*, 227
—*passerina*, 227
—*picui*, 227
—*talpacoti*, 227
*Connochaetes taurinus*, 515
*Conopeum tenuissimum*, 178
*Constrictor constrictor*, 396, 401
*Conus*, 336, 345
*Cosciniopsis globosa*, 274, 336, 339, 355
*Cranosina coronata*, 272, 281, 355
*Crassimarginatella*, 279
***Crassimarginatella cookae***, 272, 275, 277, 355
*Crassimarginatella marginalis*, 272, 275, 279, 355
—*tincta*, 276
*Crenosoma striatum*, 379–381
*Crepidacantha longiseta*, 273, 313, 355
*Cribrilaria*, 290, 291
—*africana*, 290
—cf. *flabellifera*, 273, 286, 290, 291, 355
—var. *flabellifera*, 290
—*harmeri*, 273, 290–292, 355
—cf. *innominata*, 273, 286, 291
—*radiata*, 290
—var. *flabellifera*, 290
—var. *innominata*, 290
*Crisia*, 272
—*boryi*, 286
—*elongata*, 272
*Crisina*,
—*radians*, 272
*Cryptobranchus*, 747
*Cryptochiton stelleri*, 700
*Cryptophaps*, 218
*Ctenomys*, 675–683
—*argentinus*, 675, 677, 681
—*australis*, 675–677, 681
—*azarae*, 681
—*conoveri*, 675–677, 681
—*dorbigny*, 675–677, 681
—*frater*, 679
—*fulvus*, 681
—*latro*, 681
—*lewisi*, 679
—*magellanicus*, 681
—*maulinus*, 681
—*mendocinus*, 675–677, 681
—*opimus*, 679, 681
—*pearsoni*, 679
—*perrensis*, 675–677, 681
—*porteousi*, 675–677, 681
—*rionegrensis*, 675–677, 679, 681
—*robustus*, 681
—*steinbachi*, 681
—*talarum*, 676, 679, 681
—*torquatus*, 679, 681
—*tucumanus*, 681
—*yolandae*, 675–678, 681
*Cyprinus carpio*, 145, 556
*Cyrtacanthacris tartarica*, 251

*Daldorfia horrida*, 670
*Dama dama*, 21, 22
*Dardanus*, 277, 336, 345
*Dasyuroides byrnei*, 510, 515

*Dasyurus viverrinus*, 511, 515
*Delta sakalavum*, 486
*Dendrolagus matchii*, 517
*Dentalium entalis*, 698
*Diachoris hirtissima*, 288
*Didelphis virginiana*, 507, 509, 510, 514
*Didunculus*, 219
—*strigirostris*, 228
*Diodora*, 698
*Diomedea cauta*, 724
—*chlororhynchos*, 719–727
— —*chlororhynchos*, 720
—*chrysostoma*, 720
—*epomophora*, 720
—*exulans*, 720
—*immutabilis*, 720
—*irrorata*, 721
—*melanophris*, 720
*Diploecium simplex*, 318
*Dipodomys*, 512–514, 517
—*deserti*, 511, 515
—*merriami*, 511, 515
—*microps*, 450, 454, 460, 511
—*ordii*, 515
—*panamintinus*, 515
*Dolomedes minor*, 233, 234
*Drepanophora corrugata*, 274, 336, 338, 355
***Drepanophora indica***, 274, 336, 338, 339, 351, 356
*Drepanophora verrucosa*, 339
*Drepanoptila*, 218
*Drosophila*, 233, 704
—*immigrans*, 233
—*melanogaster*, 233
*Ducula*, 219
—*aenea*, 228
—*badia*, 228
—*bicolor*, 228
—*myristicivora*, 228
—*pacifica*, 228
—*pinon*, 228
—*pistrinaria*, 228
—*rubicera*, 228
—*rufigaster*, 228
—*spilorrhoa*, 228
—*whartoni*, 228
—*zoeae*, 228

*Elaphurus*, 198
—*davidianus*, 197–203, 466, 467
*Electra pilosa*, 178
*Emarginula*, 698
*Emys orbicularis*, 762
*Engraulis anchiota*, 134
—*capensis*, 134
—*japonica*, 134
*Epomophorus*, 635, 641, 643
—*crypturus*, 633, 638, 640
—*minor*, 633, 638–640, 645
—*wahlbergi*, 633, 638–640, 645
*Eptesicus*, 357, 637, 641
—*capensis*, 638, 639, 641, 642, 645, 649
—*fuscus*, 646, 647
—*nilssonii*, 357–359
—*serotinus*, 357
—*zuluensis*, 633, 638–641, 645, 646
*Equus caballus*, 515
*Erinaceus europaeus*, 1–14, 379–382
*Eriphia*, 664
*Erithizon*, 513, 514
—*dorsatum*, 511
*Erythrocebus*, 568
—*patas*, 567, 568
*Eschara biaperta*, 342
*Escharina pesanseris*, 273, 314, 355
*Escharoides discus*, 332
—*longirostris*, 273, 293, 355
—*spinigera*, 322
*Eucratea lafontii*, 327
*Eumetopia jubatus*, 97
*Euophrys parvula*, 233
*Eurema brigitta pulchella*, 486
*Euryanas*, 619–621, 624, 625
—*finschi*, 619–628
*Euryattus*, 237
*Eutamias amoenus*, 508, 510
—*minimus*, 509, 511
*Eutrigla gurnardus*, 154
*Eutropidacris cristata*, 251
*Exechonella*, 295, 296
—*antillea*, 273, 293
—*horrida*, 273, 293, 294, 356
—*tuberculata*, 295

*Falco novaeseelandiae*, 625
*Felis catus*, 17, 19, 22, 24, 27
***Fenestrulina caseola***, 274, 322, 325, 326, 355
*Fenestrulina castacticos*, 326
—*harmeri*, 326
***Figularia lepida***, 273, 291–293, 355
*Fissurella*, 698
*Flustra brongniartii*, 326
—*cecilii*, 313
—*? duboisii*, 317
*Fulmarus glacialis*, 152–166
*Fundulus*, 598

*Gadus morrhua*, 153
*Galeopis*, 341
—*mutabilis*, 296
***Galeopsis novella***, 274, 340, 341, 355
*Gallicolumba*, 218, 219
—*beccarii*, 227
—*jobiensis*, 227
—*luzonica*, 227
—*rufigula*, 227
*Gallus domesticus*, 184
*Gasterosteus aculeatus*, 597–610
—*wheatlandi*, 598
*Gazella granti*, 515
*Genetta tigrina*, 515
*Geopelia*, 219
—*cuneata*, 227

—*humeralis*, 227
—*striata*, 227
*Geophaps*, 219
—*plumifera*, 227
—*scripta*, 227
—*smithii*, 227
*Geotrupes*, 368
*Geotrygon*, 219
—*linearis*, 227
—*montana*, 227
*Geotrypetes*, 740
***Gigantopora kirkpatricki***, 274, 322, 327, 328, 355
*Gigantopora lyncoides*, 327, 328
*Glauconycteris argentata*, 650
*Gorilla gorilla gorilla*, 573
*Goura*, 219
—*cristata*, 227
—*victoria*, 227
*Gymnophaps*, 219
—*solomonensis*, 228

*Halichoerus grypus*, 91, 95
*Haliotis*, 698
—*cracherodii*, 698
—*rufescens*, 700
*Halodeima*, 49
*Haplochromis*, 146
*Haplonycteris*, 577–579, 581, 583, 586, 589–593
—*fischeri*, 577–595
*Harbrodesmus falx*, 45
*Harpagornis moorei*, 625
*Heleophryne*, 205–106
—*natalensis*, 205, 208, 214
—*purcelli*, 205–207, 209, 211, 214, 215
—*regis*, 205–211, 214, 215
—*rosei*, 205–207, 211, 214
*Helix pomatia*, 700
*Helogale pervula*, 515
*Hemiechinus auritus*, 11
*Hemiphaga*, 219
—*novaeseelandiae*, 228
*Henicophaps*, 218
*Heteromys desmarestianus*, 511, 515
*Hiantopora spathulata*, 296
*Hippaliosina acutirostris*, 322
***Hippaliosina auriculata***, 274, 316, 321, 356
*Hippaliosina spathulifera*, 274, 316, 319, 321, 355
*Hippodinella*, 342
*Hippopetraliella magna*, 273, 296, 355
*Hippopodina*, 319
—*feegeensis*, 273, 319, 351, 355
—*mosaica*, 273, 319, 320, 356
*Hippoporella calyciformis*, 274, 322, 324, 355
—*porelliformis*, 274, 322, 355
—*spinigera*, 322
*Hipposideros*, 637, 644
—*caffer*, 633, 638, 640, 641, 644–646, 649
—*commersoni*, 438, 633, 634, 639, 641, 730, 736
—*diadema*, 735
—*gigas*, 438
—*lankadiva*, 729–737
—*ruber*, 438, 633, 638, 639, 641, 642, 650
*Hippothoa*, 177, 178
—*flagellum*, 274, 326, 355
—*pesanseris*, 314
*Holoplatys*, 233
*Holoporella pilaefera*, 343
*Holothuria*, 47–54
—*arguinensis*, 48, 49, 53, 54
—*glandifera*, 49
—*insignis*, 49
—*(Lessonothuria) arguinensis*, 45
—*(—) pardalis*, 48
—*(—) poli*, 45
—*pardalis*, 49
—*poli*, 48, 49, 53
—*(Roweothuria) arguinensis*, 51
***Holothuria (Roweothuria) vemae*** 47, 50, 52
***Holothuria vemae***, 47, 49, 53
*Holothuria verrucosa*, 49
*Homarus americanus*, 670–672
*Homo sapiens*, 390, 515
*Hydropotes inermis*, 466, 467
*Hyla arborea*, 748
—*mixe*, 214
*Hypoctonus*, 195
*Hypogeophis*, 740
—*rostratus*, 745
*Hypophthalmichthys molitrix*, 144

*Ichthyophis*, 745, 748
—*orthoplicatus*, 740, 745
—*paucesulcus*, 740, 748
*Isoodon obesulus*, 510

*Jaculus jaculus*, 645

*Kaloula pulchra*, 748
*Kobus defassa*, 515

*Labochirus*, 195
*Lacerta*, 55, 78–80
—*agilis*, 55, 56, 77, 79
—*viridis*, 77, 78
—*vivipara*, 55, 56, 77, 79
*Laephotis botswanae*, 633, 638, 639, 642
*Lagenipora*, 343
*Lagmus kochi*, 233
*Lantzi*, 758
*Larus argentatus*, 152–166
—*atricilla*, 163
—*delawarensis*, 164
—*fuscus*, 156–166
—*marinus*, 154–166
—*ridibundus*, 183–187
*Lasioglossum nitididorsatus*, 486
*Lasiurus cinereus*, 735
*Lasius flavus*, 703–706, 709, 712
*Latrodectus katipo*, 233
*Leggadina forresti*, 510
*Lekythopora*, 343
—*hystrix*, 343

*Lekythopora (cont.)*
*—perplexa*, 342
*Lepralia adpressa*, 321
*—antillea*, 293
*—calyciformis*, 322
*—feegeensis*, 319
*—gigas*, 296
*—judex*, 276
*—mosaica*, 319
*—poissonii*, 313
*—porcellana*, 318
*—venusta*, 327
*Leptonychotes weddelli*, 97
*Leptonycteris sanborni*, 643
*Leptoptila*, 219
*—cassinii*, 227
*—jamaicensis*, 227
*—plumbiceps*, 227
*—rufaxilla*, 227
*—verreauxi*, 227
*Lepus californicus*, 461
*Lessonothuria*, 47–49
*Leuconoe*, 128
*Leucosarcia*, 219
*—melanoleuca*, 227
*Liolaemus gravenhorstii*, 56
*Liomys pictus*, 511
*—salvini*, 515
*Lithobius forficatus*, 523–535
*Locusta migratoria*, 249–252, 256–263
*Lopholiamus*, 219
*—antarcticus*, 228
*Loxodonta africana*, 382–388
*Lumbricus terrestris*, 368
*Lycosa*, 233
*Lydia*, 670
*Lymnaea stagnalis appressa*, 698

*Macaca mulatta*, 24
*Macrophyllum macrophyllum*, 128
*Macropus*, 511, 514
*—agilis*, 502
*—eugenii*, 508, 510, 511, 517
*—fuliginosus*, 491–504
*—giganteus*, 491–504
*—rufogriseus*, 370
*— —rufogriseus*, 369
*—rufus*, 515
*Macropygia*, 219
*—amboinensis*, 226
*—mackinlayi*, 226
*—phasianella*, 226
*—ruficeps*, 226
*—rufipennis*, 226
*—unchall*, 226
*Macrotermes*, 634
*—falciger*, 634, 646
*Madoqua guentheri*, 466, 467
*—kirkii*, 515
*Mandrillus leucophaeus*, 574
*—sphinx*, 572, 574
*Margaretta*, 283
*—gracilior*, 274, 328, 330, 355
*—tenuis*, 274, 328, 330, 355
*Marmota monax*, 511
*Marpissa marina*, 233
*Mastigoproctus*, 189, 190, 194, 195
*Mauremys caspica*, 762
*Melanogrammus aeglefinus*, 153
*Melanostoma annulipes*, 486
*Meles meles*, 360–362, 367–369
*Melolontha*, 368
*Membranipora coronata*, 281
*—defensa*, 274, 276
*—marginalis*, 279
*—mauritania*, 280
*Menippe*, 670
*—mercenaria*, 663–673
*—nodifrons*, 672
*Meriones unguiculatus*, 17, 19, 21, 24
*Merlangius melangus*, 153
*Mesocricetus auratus*, 19, 21, 22, 24, 27
*—brandti*, 511
*Metriopelia*, 218, 222
*Microdipodops megacephalus*, 511, 515
*Microphthalmus similis*, 424
*Micropora*, 280
*—coriacea*, 279, 280
*—normani*, 280
*—similis*, 272, 278–280, 355
*Microporella*, 325
*—ciliata*, 324, 325
***Microporella harmeri***, 274, 322, 324, 325, 355
*Microporella orientalis*, 324, 325
*Microtus agrestis*, 4, 369
*—pennsylvanicus*, 511
*Miniopterus*, 637
*—fraterculus*, 633, 638, 639, 641, 649
*—inflatus*, 438
*—minor*, 438
*—schreibersii*, 633, 638, 641, 650
*Miopithecus*, 568
*—talapoin*, 567, 568, 573
*Mollia mauritiana*, 272, 278, 280, 355
*Monodelphis brevicaudata*, 507, 510
*'Mucronella'*, 350
*—cothurnica*, 274, 350, 355
*—porelliformis*, 322
*Mungos mungo*, 515
*Muntjak muntjak reevesi*, 466, 467
*Mus domesticus*, 363
*—musculus*, 16, 18, 21, 22, 24, 26, 511
*Mustela vison*, 515
*Myocaster coypus*, 17, 19
*Myotis*, 637
*—adversus*, 127, 129
*—albescens*, 128
*—bocagii*, 128, 649
*—capaccinii*, 128
*—dasycneme*, 126, 128, 129
*—daubentoni*, 113–132
*—grisescens*, 128

—*lucifugus*, 128, 735
—*macrotarsus*, 128
—*myotis*, 126, 127
—*mystacinus*, 127
—*nattereri*, 127
—*pilosa*, 128
—*tricolor*, 633, 634, 637–642, 650
—*velifer*, 128
—*welwitschii*, 633, 638, 639, 649
—*yumanensis*, 128
*Myrmecobius fasciatus*, 511
*Mystus (mystus) vittatus*, 145

*Napeozapus insignis*, 516
*Nasonia*, 704
*Natrix natrix*, 396, 401, 402
—*piscator*, 395–404
*Nellia simplex*, 288
—*tenuis*, 273, 283, 286, 288, 355
*Nelliella simplex*, 288
*Neofundulus*, 661
*Neoramia setosa*, 233
*Neotoma lepida*, 18, 21, 22, 511, 515
*Nephrops*, 163, 165
*Nereis diversicolor*, 700
—*pelagica*, 427
*Nerilla antennata*, 422
*Nerillidium troglochaetoides*, 422, 424
*Nesoenas*, 218
*Nesotragus moschatus*, 466, 467, 515
*Noctilio albiventris*, 128
—*leporinus*, 127, 128
*Nomadacris septemfasciata*, 251
*Notomys alexis*, 510, 514, 515, 645
—*cervinus*, 509, 510, 514
*Notophthalmus viridescens*, 743
*Nyctalus*, 357
—*leisleri*, 357
—*noctula*, 357
*Nycteris*, 635, 637
—*grandis*, 633, 634, 638, 639, 641, 643
—*macrotis*, 633, 637, 638, 643, 649
—*thebaica*, 438, 633, 637, 638, 641, 643, 649
*Nycticebus sanborni*, 128
*Nycticeus*, 637
—*schlieffenii*, 633, 634, 638–642, 650

*Ocyphaps*, 219
—*lophotes*, 227
*Odobenus rosmarus*, 95
*Odocoileus hemionus*, 21
—*virginianus*, 21, 22, 466, 467
*Oena*, 219
— *capensis*, 227
*Ommatoiulus moreletii*, 35–46
*Onchopora ventricosa*, 318
*Oncocladosoma castaneum*, 35–46
*Onychoblestrum*, 277
—*hastingsae*, 277
***Onychoblestrum secunda***, 272, 277, 278, 355
*Onychomys torridus*, 511, 645
*Ophiodon elongatus*, 558
*Ophiopholis aculeata*, 134
*Ophisaurus apodus*, 109
*Ophyiulus verruculiger*, 35–46
*Opsanus tau*, 556
*Oreochromis*, 134
—*mossambicus*, 146
—*niloticus*, 133–149
*Ornithodorous*, 533
*Oryctolagus cuniculus*, 374–379
*Oryx gazella*, 468
*Osthimosia*, 343
*Otidiphaps*, 219
—*nobilis*, 227
*Ourebia ourebi*, 466, 467
*Ovis ammon aries*, 466, 467
—*aries*, 19, 21, 22, 514, 515
*Oxydesmus*, 45
*Ozius*, 664

*Pachycleithonia mutabilis*, 273, 296, 297
*Pachymelus limbatus*, 475–489
*Pan troglodytes*, 573
— —*troglodytes*, 573
*Panthera leo*, 515
*Paraechinus aethiopicus*, 11
*Parasmittina*, 300, 302
—*areolata*, 273, 294, 298, 355
***Parasmittina cautela***, 273, 298, 299, 356
—***kirkpatricki***, 273, 299, 300, 356
*Parasmittina latiavicularia*, 273, 301, 302, 356
***Parasmittina margaritata***, 273, 302–304, 356
—***mauritiana***, 273, 302–304, 356
*Parasmittina murarmata*, 273, 303, 304, 355
—*novella*, 309, 310
—*ornata*, 273, 302, 305, 307, 355
—*parsevalii*, 273, 307, 308, 355
***Parasmittina recidiva***, 273, 301, 309, 310, 356
*Parasmittina rostriformis*, 273, 308, 310, 355
—*serrula*, 309, 310
—*signata*, 312
—*tropica*, 273, 307, 311, 355
—*tubula*, 273, 301, 311, 312, 356
*Parergodrilus heideri*, 422
*Patella*, 686, 698–700
— *vulgata*, 685–702
*Phascolarctos cinereus*, 461
*Pedetes capensis*, 515
*Pelecanus occidentalis*, 163
*Periplaneta*, 699
*Perognathus longimembris*, 511
—*parvus*, 511
*Peromyscus crinitus*, 511
—*eremicus*, 511
—*leucopus*, 17, 18, 21, 511
—*maniculatus*, 18, 20–22, 508, 509, 511, 515
— *truei*, 511
*Petrophassa*, 219
— *albipennis*, 227
— *rufipennis*, 227
*Phapitreron*, 219

*Phapitreron (cont.)*
*— leucotis*, 228
*Phaps*, 219
*— chalcoptera*, 227
*—elegans*, 227
*Phenacomys longicaudus*, 18, 20
*Phoca hispida*, 97
*—vitulina*, 83–98
*Phoebetria fusca*, 720
*—palpebrata*, 720
*Phylactella*, 349
*—columnaris*, 274, 346, 349, 356
*Pinna*, 345, 348
*Pipistrellus*, 637, 641
*—kuhlii*, 633, 638, 649
*—nanus*, 633, 634, 638, 639, 641, 649
*—pipistrellus*, 735
*—rueppellii*, 633, 637, 638, 650
*—rusticus*, 633, 637, 638
*Pitymys pinetorum*, 511
*Pizonyx vivesi*, 122, 128
*Platyarthrus*, 710, 712, 715–717
*—hoffmannseggi*, 703–717
*Plecotus*, 116
*—auritus*, 114, 125, 129
*Plesiothoa*, 177
*Ploceus philippinus*, 239–248
*Pollachius virens*, 153
*Polyodon spathula*, 134
*Pomatias elegans*, 10
*Pomatoceros lamarckii*, 426
*Pongo pygmaeus*, 390
*Porcello laevis*, 717
*Porella nitidissima*, 297
*Porphyrio mantelli*, 622, 625
*Porrhothele antipodiana*, 233
*Portia*, 231–235
*—africana*, 232
*—albimana*, 232
*—fimbriata*, 231–238
*—labiata*, 231–238
*—schultzi*, 231–238
*Potorous apicilis (= tridacylus)*, 516
*Potorus tridactylus*, 510
*Procavia habessinica*, 461
*Proteus*, 747
*—anguineus*, 743
*Protodriloides*, 405–432
*—chaetifer*, 405, 406, 409, 410, 412, 414, 417, 418, 420, 422, 424, 426–428
*—symbioticus*, 405, 406, 409, 410, 412, 414, 417, 418, 420, 422, 424, 426, 428
*Protodrilus*, 405, 406, 422, 424, 426–429
*Psammomys obesus*, 443–462, 645
*Pseudomys australis*, 510
*—hermannsbergensis*, 510
*—nanus*, 510
*Psilopsella uniseriata*, 274, 320, 324, 355
*Psithyrus*, 486
*Pterolebias*, 657–662
*—bokermanni*, 657, 661
*—hoignei*, 661
*—longipinnis*, 657, 661
***Pterolebias phasianus***, 658–661
*Pterolebias rubrocaudatus*, 661
*—staecki*, 657, 661
*—zonatus*, 661
*Pteropus vampyrus*, 643
*Ptilinopus*, 219
*—aurantifrons*, 228
*—coronulatus*, 228
*—insolitus*, 228
*—iozonus*, 228
*—leclancheri*, 228
*—magnificus*, 228
*—melanospila*, 228
*—perlatus*, 228
*—porphyraceus*, 228
*—pulchellus*, 228
*—regina*, 228
*—richardsii*, 228
*—rivoli*, 228
*—roseicapilla*, 228
*—solomonensis*, 228
*—superbus*, 228
*—viridis*, 228
*Ptychohyla leonhardschultzei*, 214
*Pungitius pungitius*, 598

*Quelea quelea*, 186

*Rana pipiens*, 748
*—ridibunda*, 762
*—temporaria*, 748
*Raphicerus campestris*, 466, 467
*Rattus norvegicus*, 16, 18, 21, 22, 24, 26, 511, 515
*Redunca redunca*, 466, 467
*Reinwardtoena*, 219
*—reinwardtsi*, 226
*Retepora hincksii*, 274, 331, 332, 356
*—tenuis*, 330
*Rhinolophus*, 637, 644
*—blasii*, 633, 634, 638–642, 649, 650, 735
*—clivosus*, 633, 638, 639, 644, 649, 650, 735
*—deckeni*, 438
*—fumigatus*, 438, 633, 638, 639, 642, 644, 649
*—hildebrandtii*, 633, 638, 639, 641, 642, 645, 649, 650, 735
*—landeri*, 438, 735
*—megaphyllus*, 735
*—rouxi*, 729–737
*—simulator*, 633, 638, 649, 735
*—swinnyi*, 735
*Rhinopoma hardwickei*, 643
*—kinneari*, 643
*Rhynchopora bispinosa*, 334
*—corrugata*, 338
*Rhynchops nigra*, 129
*Rhynchozoon discus*, 274, 332, 334, 356
*—documentum*, 335
***Rhynchozoon ferocula***, 274, 332–334, 356
***—haha***, 274, 328, 334, 356
***—pustulans***, 274, 333, 335, 336, 351, 356

—*splendens*, 274, 333, 335, 336, 356
*Rhynchozoon tubulosum*, 274, 336, 338, 355
*Rimulostoma signatum*, 273, 307, 312, 313
*Rodentolepsis (Hymenolepis) steudeneri*, 380
*Rogicka biserialis*, 273, 301, 313, 314, 355
*Romalea microptera*, 249, 251, 252, 254, 262–266
*Ropalidia hova*, 486
***Roweothuria***, 47–49, 53
*Rupicapra rupicapra*, 466, 467
*Rutilus rutilus*, 556
*Saccocirrus*, 405–432
—*krusadensis*, 405, 410, 412, 414, 416–418, 420, 422, 424, 426, 427
—*papillocercus*, 405, 406, 409, 414, 416, 417, 420
*Salamandra*, 747
—*salamandra*, 743, 748
*Salicornaria punctata*, 282
*Salmo gairdneri*, 556, 558
*Sarcophilus harrisii*, 515
*Sardinops ocellata*, 134
*Savignyella lafontii*, 274, 327, 355
*Scardafella*, 219
—*inca*, 227
—*squammata*, 227
*Schizomavella auriculata*, 317
***Schizomavella harmeri***, 273, 315, 316, 355
*Schizomavella inclusa*, 273, 307, 314, 315, 355
***Schizomavella incompta***, 273, 307, 315, 356
*Schizomavella punctigera*, 317
*Schizoporella ampla*, 341, 342
—*bernardii*, 342
—*biserialis*, 313
—*inclusa*, 314, 315
—*nivea*, 318
—*venusta*, 327
*Sciurus carolinensis*, 509, 511
—*persicus*, 511
—*vulgaris*, 51
*Scorpiodinipora*, 342
*Scotoecus*, 637
—*albigula*, 633, 634, 638–642, 646
—*hindei*, 633, 638—641, 645
*Scotophilus*, 637
—*dinganii*, 633, 634, 638–642, 649
—*viridis*, 633, 638–640
*Scrupocellaria*, 285, 286, 330
—*diadema*, 272, 284, 285, 355
***Scrupocellaria limatula***, 272, 284, 286, 356
*Scrupocellaria maderensis*, 272, 283, 285, 355
—*minutata*, 272, 283–285, 356
—*pusilla*, 283
—*spatulata*, 272, 283, 285, 355
*Selenkothuria*, 49
*Semieschara magna*, 296
*Semperothuria*, 49
*Sertularia neritina*, 289
*Setonix brachyurus*, 515
*Setosellina coronata*, 281
*Sigmodon hispidus*, 17, 18
*Siphonops*, 740
*Siren*, 748
*Sminthopsis crassicaudata*, 510, 515
—*macroura*, 510
*Smittia areolata*, 298
—*latiavicularia*, 301
—*marmorea*, 298
—*murarmata*, 304
—*ornata*, 305
—*reticulata*, 300
—*rostriformis*, 310
—*signata*, 312
—*tropica*, 311
—*tubula*, 311
*Smittina areolata*, 298
—*nitidissima*, 273, 297, 298, 355
—*parsevalii*, 307, 309
—*reticulata*, 300
—*signata*, 312
—*tropica*, 311
—*tubula*, 311
*Smittipora abyssicola*, 281
—*harmeriana*, 272, 278, 281, 355
—*levinsoni*, 281
*Smittoidea reticulata*, 301
*Spermophilopsis leptodactylus*, 511
*Spermophilus beldingi*, 511
—*citellus*, 511
—*saturatus*, 511, 515
—*tereticaudus*, 511
—*tridecemlineatus*, 511
—*undulatus*, 511
*Sphenodon*, 55
*Spirunoides erinacei*, 380, 381
*Staroenas*, 218
*Steatoda*, 233
*Steginoporella buskii*, 272, 282, 355
*Stephanopora cribrispinata*, 273, 294–296
*Stephanosella*, 342
—*bernardii*, 341
*Strabena discola*, 486
*Streptopelia*, 218, 219, 222
—*bitorquata*, 226
—*capicola*, 226
—*chinensis*, 226
—*decaocto*, 226
—*decipiens*, 226
—*lugens*, 226
—*orientalis*, 226
—*picturata*, 222, 226
—*reichenowi*, 221, 226
—*roseogrisea*, 226
—*semitorquata*, 226
—*senegalensis*, 226
—*tranquebarica*, 226
—*turtur*, 226
—*vinacea*, 226
*Stygocapitella subterranea*, 422
*Stylopoma duboisii*, 273, 317, 355
*Sula bassana*, 152–166, 725
*Sus scrofa*, 25, 515
*Sylvicapra grimmia*, 466, 467

*Tachyeres*, 622
*Tachypodoiulus niger*, 45

*Tadarida*, 637, 638, 641, 644, 647
—*braziliensis*, 644, 647
—*condylura*, 633, 637–639, 641, 642, 644, 646–649
—*macrotis*, 644
—*pumila*, 633, 637–639, 641, 642, 644, 646–649
*Tamias striatus*, 511, 515
*Tamiasciurus hudsonicus*, 511
*Taphozous*, 433, 440
—*georgianus*, 433, 436
—*hildegardeae*, 433–442
—*kachensis*, 436
—*longimanus*, 433, 440
—*mauritianus*, 633, 634, 638–643, 646, 647, 649
—*nudiventris*, 436, 437
—*perforatus*, 436, 440
*Tayassu tajacu*, 461
*Testudo hermanni*, 99–111
*Tetragnatha*, 233
*Tetraplaria ventricosa*, 273, 318, 355
*Tegenaria domestica*, 233
*Teuchopora*, 295
—*horrida*, 293
*Thalamoporella granulata* var. *stapifera*, 282
—*rozieri*, 282
—*stapifera*, 272, 282, 319, 355
*Thamnophis sirtalis*, 56
*Thelyphonellus*, 189, 194, 195
*Thelyphonus*, 189, 194, 195
—*caudatus*, 189
—*indicus*, 190, 195
—*linganus*, 189–196
—*sepiaris*, 191
*Thunnus*, 558
*Thylogale billardieri*, 511, 517
*Tilapia esculenta*, 144
—*zillii*, 145
*Tinca tinca*, 556
*Tragelaphus imberbis*, 468
*Tremogasterina spathulata*, 273, 296, 299, 351, 355
*Treron*, 219
—*apicauda*, 228
—*calva*, 218, 228
—*capellei*, 228
—*curvirostris*, 228
—*pompadora*, 228
—*sphenura*, 228
—*vernans*, 228
—*waalia*, 228
*Triaenops persicus*, 438
*Trichechus inunguis*, 492
*Trigonectes*, 661
*Triphyllozoon tenue*, 274, 330, 331, 356
*Trisopterus esmarkii*, 153
*Trite auricoma*, 233, 237
*Triturus*, 748, 754, 755, 763
—*cristatus*, 743, 748, 763
——*karelinii*, 762
—*helveticus*, 761
—*pyrrhogaster*, 743
—*vulgaris*, 743, 753–763
——*borealis*, 761
——*graecus*, 759
——*kosswigi*, 753–756, 758, 759, 761, 762
——*lantzi*, 753–755, 759
——*meridionalis*, 759, 762
——*minutius*, 762
***Triturus vulgaris schmidtleri***, 753, 755, 757–762
*Triturus vulgaris vulgaris*, 753–755, 758–762
*Tropidonotus piscator*, 396
*Trugon*, 219
—*terrestris*, 227
*Trypostega venusta*, 274, 327, 355
*Tubucellaria gracilior*, 328
*Turacoena*, 218
*Turbicellepora*, 342
—*ampla*, 274, 320, 341, 342, 356
*Turtur*, 219
—*abyssinicus*, 226
—*afer*, 226
—*brehmeri*, 226
—*chalcospilos*, 226
—*tympanistria*, 226
*Typhlonectes*, 740, 745, 747
—*compressicauda*, 740, 745
*Typopeltis*, 189, 194
*Typosyllis variegata*, 427

*Unio*, 699
—*pictorum*, 699
*Uraetyphlus*, 740
*Uromys*, 508
—*caudimaculatus*, 510
*Uropelia*, 218

*Vampirolepis erinacei*, 380, 381
*Vanellus vanellus*, 537–548
*Vaneyothuria*, 47
*Velumella harmeriana*, 281
*Vespertilio*, 357
—*murinus*, 357
*Vincularia abyssicola*, 281
*Vipera aspis*, 56

*Xenochrophis piscator*, 396
*Xenopus*, 748
—*laevis*, 745
*Xiphophorus helleri*, 145, 146
*Xylocopa*, 486

*Zalophus californicus*, 97
*Zapus hudsonicus*, 514
—*trinotatus*, 508–510, 514
*Zenaida*, 219
—*asiatica*, 227
—*auriculata*, 227
—*aurita*, 227
—*galapagoensis*, 227
—*macroura*, 227
*Zonotrichia leucophrys*, 725
*Zygiella*, 237
*Zyzomys argurus*, 510

# JOURNAL OF ZOOLOGY

VOLUME 215

EASTERN MICHIGAN UNIVERSITY
LIBRARY

OCT 28 1988

SCIENCE & TECHNOLOGY

Published by
THE ZOOLOGICAL SOCIETY
OF LONDON
at
OXFORD UNIVERSITY PRESS
1987

*Dates of publication of Volume 215*

Part 1, pp. 1–196, 20 May 1988
Part 2, pp. 197–388, 17 June 1988
Part 3, pp. 389–575, 12 July 1988
Part 4, pp. 577–764, 3 August 1988

©1988 Zoological Society of London

*Printed in Great Britain*
*at the Alden Press, Oxford*

# LIST OF CONTENTS

Volume 215


Page

ASHER, G. W., ADAM, J. L., OTWAY, W., BOWMAR, P., VAN REENAN, G., MACKINTOSH, C. G. and DRATCH, P., Hybridization of Père David's deer (*Elaphurus davidianus*) and red deer (*Cervus elaphus*) by artificial insemination . . . . . 197

AXMACHER, H. and HOFMANN, R. R., Morphological characteristics of the masseter muscle of 22 ruminant species . . . . . 463

BANERJEE, S., The functional significance of wing architecture in acridid Orthoptera . 249

BENNETT, M. B., Morphometric analysis of the gills of the European eel, *Anguilla anguilla* 549

BILLY, A. J., Observations on the embryology of the unisexual lizard *Cnemidophorus uniparens* (Teiidae) . . . . . 55

BLUNDON, J. A., Morphology and muscle stress of chelae of temperate and tropical stone crabs *Menippe mercenaria* . . . . . 663

BUSH, M. S., The ultrastructure and function of the intestine of *Patella vulgata* . . 685

CANCINO, J. M. and HUGHES, R. N., The zooidal polymorphism and astogeny of *Celleporella hyalina* (Bryozoa: Cheilostomata) . . . . . 167

CHANNING, A., BOYCOTT, R. and VAN HENSBERGEN, H. J., Morphological variation of *Heleophryne* tadpoles from the Cape Province, South Africa (Anura: Heleophrynidae) . . . . . 205

CORRUCCINI, R. S., Morphometric replicability using chords and cartesian coordinates of the same landmarks . . . . . 389

COSTA, W. J. E. M., A new species of the neotropical annual fish genus *Pterolebias* (Cyprinodontiformes, Rivulidae), from Central Brazil . . . . . 657

DEGEN, A. A., KAM, M. and JURGRAU, D., Energy requirements of fat sand rats (*Psammomys obesus*) and their efficiency of utilization of the saltbush *Atriplex halimus* for maintenance . . . . . 443

DICKMAN, C. R., Age-related dietary change in the European hedgehog, *Erinaceus europaeus* . . . . . 1

DUTRILLAUX, B., DUTRILLAUX, A.-M., LOMBARD, M., GAUTIER, J.-P., COOPER, R., MOYSAN, F. and LERNOULD, J. M., The karyotype of *Cercopithecus solatus* Harrison 1988, a new species belonging to *C. lhoesti*, and its phylogenetic relationships with other guenons . . . . . 611

ECKRICH, M. and NEUWEILER, G., Food habits of the sympatric insectivorous bats *Rhinolophus rouxi* and *Hipposideros lankadiva* from Sri Lanka . . . . . 729

FURNESS, R. W., Influences of status and recent breeding experience on the moult strategy of the yellow-nosed albatross *Diomedea chlororhynchos* . . . . . 719

GALBRAITH, H., Adaptation and constraint in the growth pattern of lapwing *Vanellus vanellus* chicks . . . . . 537

GARLAND, T. JR, GEISER, F. and BAUDINETTE, R. V., Comparative locomotor performance of marsupial and placental mammals . . . . . 505

GODSELL, J., Herd formation and haul-out behaviour in harbour seals (*Phoca vitulina*) . 83

HALLAS, S. E. A., The ontogeny of behaviour in *Portia fimbriata*, *P. labiata* and *P. schultzi*, web-building jumping spiders (Araneae: Salticidae) . . . . . 231
HAPPOLD, D. C. D. and HAPPOLD, M., Renal form and function in relation to the ecology of bats (Chiroptera) from Malawi, Central Africa . . . . . 629
HARRISON, M. J. S., A new species of guenon (genus *Cercopithecus*) from Gabon . . 561
HAYWARD, P. J., Mauritian cheilostome Bryozoa . . . . . 269
HEIDEMAN, P. D., The timing of reproduction in the fruit bat *Haplonycteris fischeri* (Pteropodidae): geographic variation and delayed development . . . . . 577
HUDSON, A. V. and FURNESS, R. W., Utilization of discarded fish by scavenging seabirds behind whitefish trawlers in Shetland . . . . . 151
JONES, G. and RAYNER, J. M. V., Flight performance, foraging tactics and echolocation in free-living Daubenton's bats *Myotis daubentoni* (Chiroptera: Vespertilionidae) . 113
KAM, M and DEGEN, A. A., Water, electrolyte and nitrogen balances of fat sand rats (*Psammomys obesus*) when consuming the saltbush *Atriplex halimus* . . . . 453
LITTLEWOOD, P. M. H., The chemosensory behaviour of *Lithobius forficatus* (Myriapoda: Chilopoda). 2. Bioassay and chemistry of the coxal pheromone . . . . . 523
MAINA, J. N. and MALOIY, G. M. O., A scanning and transmission electron microscopic study of the lung of a caecilian *Boulengerula taitanus* . . . . . 739
MCARTHUR, C. and SANSON, G. D., Tooth wear in eastern grey kangaroos (*Macropus giganteus*) and western grey kangaroos (*Macropus fuliginosus*), and its potential influence on diet selection, digestion and population parameters . . . . . 491
MCKILLUP, S. C., Behaviour of the millipedes *Ommatoiulus moreletii*, *Ophyiulus verruculiger* and *Oncocladosoma castaneum* in response to visible light; an explanation for the invasion of houses by *Ommatoiulus moreletii* . . . . . 35
MCWILLIAM, A. N., The reproductive cycle of male tomb bats, *Taphozous hildegardeae* (Chiroptera: Emballonuridae), in a seasonal environment of the African tropics . 433
MEEK, R., The thermal ecology of Hermann's tortoise (*Testudo hermanni*) in summer and autumn in Yugoslavia . . . . . 99
MENDL, M., The effects of litter size variation on mother-offspring relationships and behavioural and physical development in several mammalian species (principally rodents) . . . . . 15
MITTAL, A. K., SINGH, J. P. N. and SINGH, S. K., Succinic dehydrogenase activity in the epidermis of *Natrix piscator* during its sloughing cycle . . . . . 395
NARASIMHACHARYA, A. V. R. L., KOTAK, V. C. and SHARP, P. J., Environmental and hormonal interactions in the regulation of seasonal breeding in free-living male Indian baya weaver birds (*Ploceus philippinus*) . . . . . 239
NELSEN, I. and BRANDL, R., Plasma glucose and haematocrit of young black-headed gulls *Larus ridibundus* . . . . . 183
NILSSON, L. A. and RABAKONANDRIANINA, E., Chemical signalling and monopolization of nectar resources by territorial *Pachymelus limbatus* (Hymenoptera, Anthophoridae) male bees in Madagascar . . . . . 475
NORTHCOTT, M. E. and BEVERIDGE, M. C. M., The development and structure of pharyngeal apparatus associated with filter feeding in tilapias (*Oreochromis niloticus*) . . 133
PURSCHKE, G. and JOUIN, C., Anatomy and ultrastructure of the ventral pharyngeal organs of *Saccocirrus* (Saccocirridae) and *Protodriloides* (Protodriloidae fam. n.) with remarks on the phylogenetic relationships within the Protodrilida (Annelida: Polychaeta) . . . . . 405

RACEY, P. A., Communications from the Mammal Society—No. 56 . . . . . 357
RAXWORTHY, C. J., A description and study of a new dwarf sub-species of smooth newt, *Triturus vulgaris*, from western Anatolia, Turkey . . . . . 753
ROBERTSON, H. A., Relationships between body weight, egg weight, and clutch size in pigeons and doves (Aves: Columbiformes) . . . . . 217
THANDAR, A. S., A new subgenus of *Holothuria* with a description of a new species from the south-east Atlantic Ocean . . . . . 47
VITULLO, A. D., ROLDAN, E. R. S. and MERANI, M. S., On the morphology of spermatozoa of tuco-tucos, *Ctenomys* (Rodentia: Ctenomyidae): New data and its implications for the evolution of the genus . . . . . 675
WARD, G. and FITZGERALD, G. J., Effects of sex ratio on male behaviour and reproductive success in a field population of threespine sticklebacks (*Gasterosteus aculeatus*) (Pisces: Gasterosteidae) . . . . . 597
WEYGOLDT, P., Sperm transfer and spermatophore morphology in the whip scorpion, *Thelyphonus linganus* (Arachnida: Uropygi: Thelyphonidae) . . . . . 189
WILLIAMS, T. and FRANKS, N. R., Population size and growth rate, sex ratio and behaviour in the ant isopod, *Platyarthrus hoffmannseggi* . . . . . 703
WORTHY, T. H., Loss of flight ability in the extinct New Zealand duck *Euryanas finschi* . 619